

## A NEW SPECIES OF THE GENUS *BACTROCERA* MACQUART FROM CHINA (DIPTERA, TEPHRITIDAE)

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**Abstract** A new species of the genus *Bactrocera* Macquart (Diptera, Tephritidae) is described from Yunnan Province, China was described. The type specimens are deposited in Fujian Agriculture and Forestry University.

**Key words** Diptera, Tephritidae, *Bactrocera*, new species, Yunnan, China.

The genus *Bactrocera* Macquart belongs to the subfamily Dacinae (Diptera, Tephritidae), which was erected by Macquart (1835) for a single species, *B. longicornis* Macquart from Solomon Is. Fruit flies of *Bactrocera* are distributed mainly in tropical Asia, the Pacific and Australian Regions, including more than 470 described species (White *et* Hancock, 1997). In China, 45 species of *Bactrocera* had been recorded by Wang (1996, 2008) and Lin (2005, 2006). While checking the specimens from Yunnan Province, we found a new species collected in Jinghong.

### *Bactrocera* Macquart, 1835

*Bactrocera* Macquart, 1835: 452. Type-species: *B. longicornis* Macquart, 1835, by monotypy.

*Dasyneura* Saunders, 1842: 60. Type-species: *D. zonata* Saunders, 1842 [= *Bactrocera* (*Bactrocera*) *zonata* (Saunders, 1842)], by monotypy.

*Strumeta* Walker, 1856: 33. Type-species: *S. conformis* Walker, 1856 [= *Bactrocera* (*Bactrocera*) *umbrosa* (Fabricius, 1805)], by monotypy.

*Chaetodacus* Bezzi, 1913: 93. Type-species: *Musca ferruginea* Fabricius, 1794 [= *Bactrocera* (*Bactrocera*) *dorsalis* (Hendel, 1912)], by original designation.

*Marquesadacus* Malloch, 1932: 145 (as subgenus of *Dacus*). Type-species: *Chaetodacus perfuscus* Aubertin, 1929 [= *Bactrocera* (*Bactrocera*) *perfusca* (Aubertin, 1929)], by monotypy.

*Apodacus* Perkins, 1939: 26. Type-species: *A. cheesmanae* Perkins, 1939 [= *Bactrocera* (*Bactrocera*) *cheesmanae* (Perkins, 1939)], by original designation.

*Aglaodacus* Munro, 1984: 25. Type-species: *A. nesiotis* Munro, 1984 [= *Bactrocera* (*Daculus*) *nesiotis* (Munro, 1984)], by original designation.

*Mauritidacus* Munro, 1984: 25. Type-species: *M. montyanus* Munro, 1984 [= *Bactrocera* (*Afrodacus*) *montyanus* (Munro, 1984)], by original designation.

### *Bactrocera* (*Bactrocera*) *cheni* sp. nov. (Figs 1–4)

Description. Male, body length 7.4 mm.

Head. Vertical length 1.8 mm. Fulvous with fuscous around orbital setae and on anteromedial hump; orbital setae black: 1 *s. or.*, 2 *i. or.*; lunule fuscous. Ocellar triangle black. Vertex fuscous black. Face (Fig. 1) with a big-sized oval spots. Gena fulvous, brown subocular spot present, black seta

present. Occiput fuscous black, yellow along eye margins. Occipital row with 5 dark setae. Antennae with segments 1 and 2 fulvous, segment 3 fulvous with fuscous to black on apex and outer surface. Arista black (fulvous basally). Length of segments: 0.15 mm; 0.30 mm; 0.75 mm.

Thorax. Scutum (Fig. 2) black except brown below and behind later postsutural vittae, around transverse suture and inside postpronotal lobes. Pleural areas black except red-brown below postpronotal lobes. Yellow markings as follows: postpronotal lobe; notopleuron; narrow-sized mesopleural stripe, slightly wider than notopleuron; anatergite (posterior apex black); anterior 3/5 katatergite (remainder black); two medium parallel-sided lateral postsutural vittae ending at *ia.* setae. Postnotum black. Scutellum yellow except for narrow black basal band. Setae: *sc.* 2; *prsc.* 2; *ia.* 1; *p. sa.* 1; *a. sa.* 1; *mpl.* 1; *npl.* 2; *scp.* 4; all setae well developed and black.

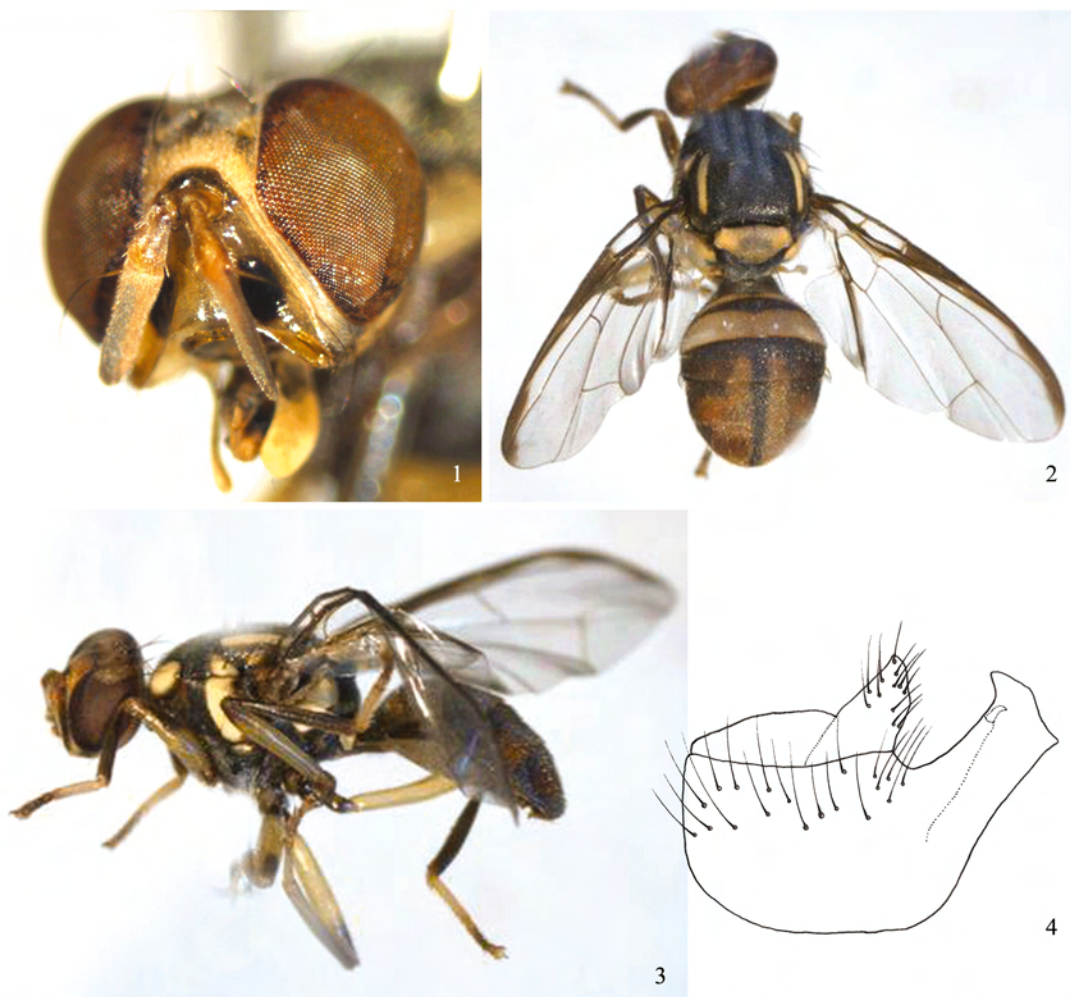
Wings (Fig. 3). Length 6.5 mm; cells *bc* and *c* colourless; cell *br* with microtrichia anteriorly, but clear posteriorly; a narrow fuscous costal band confluent with  $R_{2+3}$  and widening slightly as it crosses this vein before ending between extremities of  $R_{4+5}$  and *M*; a narrow dark anal streak ending well before wing margin; dense microtrichia around  $A_1$  and  $CuA_2$ ; supernumerary lobe of medium development.

Legs. Fore femora fulvous with black on 1/2 of outer apical surface, with rows of long black setae on dorsal surface; inner apical 1/3 of mid femora black; inner apical 1/4 of hind femora black; fore tibiae fuscous, but fulvous basally; mid tibiae fulvous tending fuscous basally, and each with an apical black spur; hind tibiae fuscous dark.

Abdomen (Fig. 2). Oval; terga free; pecten present on tergum 3. Tergum 1 black except for a narrow, short orange-brown band on median portion,

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Figs 1–4. *Bactrocera* (*Bactrocera*) *cheni* sp. nov., ♂. 1. Head in front view. 2. Dorsal view. 3. Lateral view. 4. Epandrium, cercus and surstylus in profile.

but not reaching lateral margins; tergum 2 orange-brown with a dark transverse band across anterior portion; terga 3–5 orange-brown with a broad medial longitudinal black band over all three terga; a pair of oval orange-brown shining spots on tergum 5. Posterior lobe of surstylus short (Fig. 4).

Female. Unknown.

Etymology. This species is named after the taxonomist S. H. Chen.

Holotype ♂, China, Jinghong (22.01° N, 100.48° E), Yunnan Province, 20 Dec. 2010, ZHANG Nan-Nan. Paratypes 4 ♂♂, same data as holotype.

Distribution. China, Yunnan (Jinghong).

Host plant. Unknown.

Attractant. Cue-lure.

Remarks. This is a new number of *B. dorsalis* complex, it is similar to *Bactrocera* (*Bactrocera*) *lombokensis* Drew *et* Hancock in possessing big-sized oval spots, fore femora fulvous with black on 1/2 of outer apical surface. It differs from *lombokensis* in having inner apical 1/3 of mid femora black, inner apical 1/4 of

hind femora black, mid tibiae fulvous tending fuscous basally.

## REFERENCES

- Drew, R. A. I. 1989. The tropical fruit flies (Diptera: Tephritidae: Dacinae) of the Australasian and Oceania Regions. *Memoirs of the Queensland Museum*, 26: 1–521.
- Drew, R. A. I. and Hancock, D. L. 1994. The *Bactrocera dorsalis* complex of fruit flies (Diptera: Tephritidae: Dacinae) in Asia. *Bulletin of Entomological Research*, 2 (Suppl.): 1–68.
- Drew, R. A. I. and Hancock, D. L. 1995. New species, subgenus and records of *Bactrocera* Macquart from the South Pacific (Diptera, Tephritidae, Dacinae). *Journal of Australian Entomological Society*, 34: 7–11.
- Drew, R. A. I., Tsuruta, K. and White, I. M. 2005. A new species of pest fruit fly (Diptera: Tephritidae: Dacinae) from Sri Lanka and Africa. *African Entomology*, 13 (1): 149–154.
- Hardy, D. E. and Adachi, M. S. 1954. Studies in the fruit flies of the Philippines, Indonesia and Malaya, part 1. Dacini (Tephritidae-Diptera). *Pacific Science*, 8: 147–204.
- Hardy, D. E. 1955. A reclassification of Australian fruit flies (Tephritidae-Diptera). *Pacific Science*, 5: 115–189.
- Hardy, D. E. 1969. Taxonomy and distribution of the oriental fruit fly and related species (Tephritidae-Diptera). *Proceeding, Hawaiian Entomological Society*, 20: 395–428.
- Hardy, D. E. 1973. The fruit flies (Tephritidae-Diptera) of Thailand and bordering countries. *Pacific Insects Monograph*, 31: 1–353.

- Hardy, D. E. 1974. The fruit flies of the Philippines (Diptera: Tephritidae). *Pacific Insects Monograph*, 32: 1–266.
- Hardy, D. E. 1977. Family Tephritidae. In: Delfinado, M. D. and Hardy, D. E. (eds.), A Catalogue of Diptera of the Oriental Region, 3. Univ. of Hawaii, Honolulu. pp. 44–134.
- Hardy, D. E. 1982. The Dacini of Sulawesi (Diptera: Tephritidae). *Treubia*, 28: 173–241.
- Hardy, D. E. 1983. The fruit flies of the genus *Dacus* Fabricius of Java, Sumatra and Lombok, Indonesia (Diptera: Tephritidae). *Treubia*, 29 (1): 1–45.
- Kenji Tsuruta and Ian M. White. 2001. Eleven new species of the genus *Bactrocera* Macquart (Diptera: Tephritidae) from Sri Lanka. *Entomological Science*, 4 (1): 69–87.
- Lin, M-G, Wang, X-J, Li, W-D, Xu, W and Chen, X-L 2005. Taxonomic revision of genus *Bactrocera* Macquart from Hainan, with descriptions of two new species (Diptera, Tephritidae, Dacinae). *Acta Zootax. Sinica*, 30 (4): 842–846. [动物分类学报]
- Lin, M-G, Yang, Z-J, Wang, X-J, Li, J-Y and Li, W-D 2006. A taxonomic study of subfamily Dacinae (Diptera: Tephritidae) from Hainan, China. *Acta Entomologica Sinica*, 49 (2): 310–314.
- Wang, X-J 1996. The fruit flies (Diptera, Tephritidae) of the East Asian Region. *Acta Zootax. Sinica*, 21 (suppl.): 1–338, 265 figs, 41 pls. [动物分类学报]
- Wang, X-J, Xiao, S, Chen, X-L, Long, R and Zhang, C-L 2008. Two new species of genus *Bactrocera* Macquart (Diptera, Tephritidae) from Yunnan, China. *Acta Zootax. Sinica*, 33 (1): 73–76. [动物分类学报]
- White, I. M. and Hancock, D. L. 1997. Cabikey to the Dacini of Indo-Australasia. Windows CD-ROM. CAB International, Wallingford.

## 中国果实蝇属一新种记述 (双翅目, 实蝇科, 寡鬃实蝇亚科)

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**摘要** 记述采自中国云南的果实蝇属 (双翅目, 实蝇科) 1 新种, 陈氏果实蝇 *Bactrocera* (*Bactrocera*) *cheni* sp. nov., 模式标本保存于福建农林大学益虫研究所。

**陈氏果实蝇, 新种 *Bactrocera* (*Bactrocera*) *cheni* sp. nov.**  
(图 1~4)

新种属于桔小实蝇复合体, 新种与龙目实蝇 *Bactrocera*

(*Bactrocera*) *lombokensis* Drew et Hancock 相近, 与后者的区别为: 中足腿节内端 1/3 具黑褐色斑, 后足腿节内端 1/4 具黑褐色斑, 中足胫节黄褐色, 向基部颜色加深。

正模 ♂, 云南景洪, 2010-12-20, Cuc-lure 引诱, 张南南采。副模 4 ♂♂, 同正模。

词源: 新种种名源自分类专家 S. H. Chen 的姓氏。

**关键词** 双翅目, 实蝇科, 果实蝇属, 新种, 云南, 中国。

**中图分类号** Q969.442.6

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